CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

October 30, 2002

Mr. Jeff Hansen
CE Obsidian Energy, LLC
302 South 36th Street, Suite 400
Omaha, Nebraska 68131-3845

Dear Mr. Hansen:

SALTON SEA UNIT #6 PROJECT (02-AFC-2) DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission (Energy Commission) staff requests that CE Obsidian Energy, LLC supply the information specified in the enclosed data requests.

The subject areas addressed in the enclosed 98 data requests are air quality, biological resources, cultural resources, geologic resources, hazardous materials management, land use, public health, socioeconomics, soil and water resources, traffic and transportation, and visual resources.

Transmission System Engineering data requests will be issued following a November 5, 2002 stakeholders' workshop relating to potential changes in transmission systems adjacent to the Imperial Irrigation Utilities District. This workshop is intended to clarify forward planning of transmission lines affecting five adjacent utilities, and needs associated with the Blythe II powerplant project proposed for the area east of the Salton Sea project area. This delay will insure that no duplication of effort, or unnecessary studies are imposed upon the Salton Sea applicant.

Other data requests may be submitted at a later date. The information requested is necessary to understand the project, assess whether the project will result in significant environmental effects and conform with applicable laws, ordinances, regulations and standards, and to assess project alternatives and mitigation measures.

Written responses to the enclosed data requests are due to the Energy Commission by December 2, 2002, or at a later date agreed upon by the Energy Commission staff and the applicant.

If you are unable to provide the information requested in the data requests, or object to providing it, you must contact the committee assigned to the project and the project manager, within 10 days of receiving these requests, stating your reason for delay or objection.

If you have any questions regarding the enclosed data requests, please call me at (916) 651-8853.

Sincerely,

Robert Worl
Siting Project Manager

Enclosure

cc: POS List
Agency Distribution List

Salton Sea Unit #6 Project (02-AFC-2)
Data Requests

Technical Area: Air Quality
Authors: Gabriel Behymer and Keith Golden

BACKGROUND

Ammonia Emissions

Table 5.1-26 in the Application for Certification (AFC) indicates an annual ammonia emissions rate of 2681 tons per year during normal operations, however section 5.1.2.3.1 indicates that the "annual ammonia emission rates … are based on annual average conditions." It is not explained what maximum and minimum emissions values are used to derive these average ammonia emissions. In addition, under certain conditions, ammonia emissions can contribute to ambient PM10 impacts. The applicant did not provide an analysis of the possible PM10 impacts caused by ammonia emissions from the proposed project.

DATA REQUEST

1. Please discuss the maximum and minimum estimated total annual ammonia emissions from the facility.

2. Please discuss the potential PM10 impacts on the local environment that would be caused by the maximum potential ammonia emissions from the proposed project.

3. Please provide a summary of the empirical data that these estimates are based on and a detailed presentation of all equations, calculations and sources used.

4. Discuss a mitigation plan, including all feasible controls to further reduce ammonia emissions, that is sufficient to reduce the PM10 impacts caused by ammonia emissions to a level of insignificance.

BACKGROUND

Cooling Tower Drift Rate

Section 5.1.2.3.1 of the AFC specifies a proposed Cooling Tower Drift Rate of 0.0006%, however the Best Available Control Technology (BACT) level on many recently licensed projects (e.g. Russell City Energy Center) for cooling tower drift rate control is 0.0005%.

DATA REQUEST

5. Please discuss the use of appropriate cooling tower drift control technology to reduce the proposed Cooling Tower Drift Rate to 0.0005%.

BACKGROUND

Solid Waste Transportation Emissions

Table 5.13-3 in the AFC indicates that on average more than 165 tons of solid waste will be generated per day, and that the waste will be transported off-site by trucks. Tables G-12 and G-12.1 in the AFC detail the combustion and fugitive emissions from these trucks, however it is not clear what emissions control assumptions were used in these calculations. In addition, the applicant also does not propose any specific procedures for controlling the long-term direct emissions from these trucks.

DATA REQUEST

6. Table G-12 appears to contain an error. The “Dump Trucks”, “Water Truck” and “Boom Truck” are listed as running on gasoline. Please discuss whether the trucks indeed run on gasoline or rather on diesel. If this is an error, please reconfirm the data contained in Table G-12.

7. For all heavy trucks used for the regular transport of solid waste generated by the normal operations of the proposed facility, please discuss the following feasible mitigation measures:

   a. Idling time limitation procedures.

   b. The exclusive use of ultra low sulfur fuel (15 ppm).

   c. Road and loading pad paving, cleaning and any other efforts intended to minimize fugitive emissions from the regularly used on-site and off-site roadways.

   d. A regular engine maintenance schedule procedure.

   e. The feasibility of retrofitting the trucks with diesel particulate filters.

BACKGROUND

Emission Reductions and Offsets

There is mention in the AFC (p. 5.1-62) that the applicant intends to retrofit an existing geothermal project they own (the Leathers Facility) with H2S abatement technology to provide contemporaneous H2S emission reductions for the proposed SSU6 project. Further, the applicant mentions that PM10 emission reductions will be secured to offset the new project’s PM10 liability. Staff needs further information about this mitigation strategy for H2S and PM10.

DATA REQUEST

8. Provide modeling information verifying that retrofitting the Leathers Facility will result in H2S emissions reductions of 64 tons per year.

9. Please provide the source or sources of PM10 ERCs that will be used to mitigate the project's potential PM10 emissions. Negotiated contractual agreements can be submitted with the appropriate request for confidentiality.

BACKGROUND

Air Dispersion Modeling Analyses

Staff has not had adequate time to review the air dispersion modeling files or to prepare data requests as a result of reviewing those files. Staff may submit data requests at a later date that will address any modeling issues that arise.

Technical Area: Biological Resources
Author: Natasha Nelson

BACKGROUND

Pipeline construction must be carefully coordinated to ensure resource protection. The applicant described the pipeline construction in general, but has left out much of the detail that is important for staff's impact analysis. The following are examples of missing data:

- The pipeline corridors are said to be between 100 and 110 feet. It is unclear, however, which parts of the corridor are permanently impacted (e.g., covered by aboveground pipe) and which parts are temporarily impacted (e.g. a truck passing lane).
- During construction of the brine pipelines, the pipes are filled with water before delivery to the site (AFC, page 3-37). It was not described however how the pipes will be emptied and where and how this water will be controlled so it does not enter sensitive habitat.
- To test the pipe, there will be a hydrostatic test (AFC, page 3-38), but the applicant did not describe where the test water will be disposed of at the end of testing.
- The applicant describes the mechanical monitoring of the corridor, but does not describe how the corridor will be maintained (e.g., removal of vegetation, gates).
- The applicant anticipates shutdown maintenance periods when pipelines will be disassembled, but does not give a description of construction activities or the timeline for these activities.

The impacts to biological resources from the construction and operation of the pipelines would need to be considered by staff in their assessment of the project.

DATA REQUEST

10. Provide a description of the pipeline construction and operations activity taking place between well pads and the power plant including construction widths and describe methods for dealing with wastewater from the pipes and from hydrostatic testing.

11. Provide a description of restorative actions for areas of temporary disturbance at the well pads and along pipeline routes (if different from the temporary construction areas associated with the power plant site).

12. Provide a complete description of the pipelines' operation width and the typical maintenance scenarios during operation (e.g., driving of cars, application of herbicides).

13. Provide a description of the types of activities expected during shutdown maintenance periods (see AFC Section 4.3.2), and whether these activities can be scheduled outside of the shore bird breeding season (March through July). An estimate of noise should be provided for these activities. If the activities require additional space outside of the right-of-way, describe the potential for impact at these off-site locations.

BACKGROUND

The water supply for the power plant is from the Vail 4A lateral, which terminates at the southern end of the Salton Sea. The applicant presented historic survey results which document the presence of desert pupfish at the southern Salton Sea shoreline at the terminus of an unidentified Vail outlet. It is unclear if the water being supplied to the power plant is in lieu of it being released into the Salton Sea.

DATA REQUEST

14. Provide text and a map to clarify the various Vail laterals and outlets connected to the Salton Sea and delineate which have recorded observations of desert pupfish.

15. Provide an analysis of how the pumping of water from the Vail 4A lateral would impact the suitability of the Salton Sea shoreline for pupfish in the future. Assume various scenarios relating to the Salton Sea's future salinity.

BACKGROUND

California Department of Fish and Game has on-going surveys for desert pupfish, and has found them in a majority of irrigation drains, some shoreline pools and several tributaries of the Salton Sea. Although the applicant notes several agricultural drainages are crossed by project pipelines, no survey results are included. For example, the applicant makes a blanket statement without data that "the [Obsidian Butte] drainage that would be affected by project activities showed no sign of desert pupfish" (Biological Assessment, page 5-1).

DATA REQUEST

16. Provide a copy of the desert pupfish survey methods and results for all drainages and pools along the pipeline routes and next to well pads.

BACKGROUND

The applicant proposed that a project-specific construction noise assessment will be conducted during final design (see Condition BIO-10, page 5.5-29), but staff will need to issue their review of all project impacts biological resources in the immediate vicinity

prior to that date. Because much of the equipment that will be used for construction is typical, some estimates of noise sources can be made in a general sense. Staff requests that all potential impacts be disclosed and estimated, including noise.

DATA REQUEST

17. Provide a table of construction noise levels (during different phases) by source or construction phase and describe what technologies are available to lessen the impact. The amount of noise after the technology is in place should be estimated.

18. Provide an analysis of noise at the well pads and along pipelines from maintenance crews and the actions they are expecting to take (e.g., hammering, oil pumps, vegetation removal). Describe if the maintenance actions would be during both night and day.

19. Provide an estimate of noise level from low-level vibration during pile driving (or other major construction activity) and how far the vibration could travel during both the wet and dry times of year. The potential to impact ground-nesting birds should be evaluated based on this model.

BACKGROUND

In desert environments, the use of off-road vehicles is quite common. These vehicles cause habitat disturbance and degrade habitat quality. The applicant has proposed a new access road on Bureau of Land Management (BLM) land in order to complete the project transmission line connection to the appropriate L-line location. Staff will need to analyze the potential use of this access road by unauthorized vehicles.

DATA REQUEST

20. Provide any measures being taken by the applicant to control unauthorized use of this access road.

21. Describe if, as a result of this access road, there is a potential to increase traffic on other primitive roads in the local area (such as the one under L-line).

BACKGROUND

According to the Project Description, construction at the well pads would be scheduled for 7 days a week and 24 hours a day, for 2 to 3 weeks. When construction carries on through the night, a different set of wildlife and potential impacts arises. However, nighttime construction did not seem to be considered in the applicant's Biological Resources section. In addition, it is not clear from the application if the wells are

expected to last the entire lifetime of the power plant, or if well-drilling would need to be done sometime in the future.

DATA REQUEST

22. Provide an analysis of the impact of 24 hour per day construction could have on wildlife at the wells pads and along the worker travel corridors to the pads.

23. Make an estimate of the lifetime of well(s). If a new well would be needed during the lifetime of the project, describe the types and length of construction activities (and/or demolition activities). If the well construction would be during the shutdown maintenance periods, please provide an estimated schedule.

BACKGROUND

According to the applicant, the pipeline from the OB3 wellpad to the power plant site would include several measures to prevent and reduce brine flows into the wetland identified along McKendry Road. However, such measures were not found in the materials submitted.

DATA REQUEST

24. Provide a description of the technologies that will be placed at the OB3 well and along the OB3 pipeline that will reduce spills and potential impacts from the release of brine. The description should include the reaction time for the technology and a model of spill size (in gallons) under a worst-case and typical scenario (if different than the estimate provided in AFC Section 4.3.2).

BACKGROUND

The applicant has indicated in their Data Responses that they are requesting a permit from the U.S. Army Corps of Engineers (USACE) that will require consultation with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) for potential impacts to listed species. Because the BLM is a federal agency issuing a permit, BLM will also need to consult with USFWS. Staff does not have enough information on the coordination between these two federal agencies and how the permitting will protect all aspects of the power plant project from incidental take to make a determination of compliance with applicable laws, ordinances, regulations and standards.

DATA REQUEST

25. Provide an update on the status of the permit for incidental take of listed species from USFWS and CDFG.

26. Provide documentation that both federal agencies are aware of the overlapping nature of their permit consultation with the USFWS. Documentation can include e-mail or records of conversations /meetings.

27. Describe which aspects of the power plant construction, operation, and maintenance, are being covered under the consultation(s), and identify the lead agency for each aspect.

BACKGROUND

In evaluating the impacts of a power plant project, staff reviews which impacts are permanent, and which are temporary. The acreage amounts presented in the biological resources section of the AFC (Table 5.5-1D, page 5.5-43) did not differentiate between these two types of impacts. In addition, the amount of disturbance in Tables 3.3-2 and 5.5-1D do not match.

DATA REQUEST

28. Provide a version of Table 5.5-1D which differentiates temporary and permanent impacts and that is consistent with the Facility Description.

BACKGROUND

Although Joshua Tree National Park, located 35 miles to the north, was analyzed for air quality impacts, Santa Rosa Mountains Wilderness Area, located 30 miles to the northwest, and the Bureau of Land Management's North Algodones Sand Dunes Wilderness Area, located 32 miles to the southeast, were not analyzed by the applicant. Staff reviews the potential impacts of both nitrogen and sulfur deposition on all wilderness areas (even if not classified as an EPA Class 1 for visibility screening), and will need this information to complete their review.

DATA REQUEST

29. Model the impact of project emissions on Santa Rosa Mountains Wilderness Area and North Algodones Sand Dunes Wilderness Area. Provide the amount of nitrogen and sulfur deposition expected from the project in the units kg/ha-yr.

30. Provide an analysis of the potential for impacts from project emissions.

Technical Area: Cultural Resources
Author: Gary Reinoehl

BACKGROUND

Based on the USGS quads for the project area (most originally published in 1956), it appears there are additional structures not already addressed in the AFC, or the confidential cultural resources technical report, that could be more than 45 years old. Some aspects of integrity (setting and feeling) of these could be affected by construction of the power plant and transmission lines. Additional information on properties that surround the power plant, are adjacent to the transmission line routes, and have structures greater than 45 years old is needed. If any of these properties and structures are eligible for the California Register of Historical Resources (CRHR), there is the potential for a change in their setting which could result in a significant impact.

DATA REQUEST

31. Unless it can be demonstrated that these properties (buildings/structures) are less than 45 years old, please have an architectural historian record buildings and structures at the following locations using DPR 523 forms. Each form should provide a discussion of the significance of the building or structure under CEQA Section 15064.5, (a), (3)(A, B, C, & D). All the following location references are from the confidential cultural resource maps, Figures 2 through 6, in the Archaeological Inventory filed as part of the AFC. (August 2002).

    a. South side of Bannister near Pellett (interconnection line segment between locations L-10 and L-11, Fig. 4).

    b. North side of Bannister near Gecko (interconnection line segment between locations L-11 and L-12, Fig. 4).

    c. North side of Bannister near Vendel (interconnection line segment between locations L-12 and L-13, Fig. 4).

    d. North end of Crummer Road (interconnection line segment between locations L-1 and L-2, Fig. 2).

    e. East of the proposed Plant Site along Gentry Road, (Fig. 2).

    f. South side of the Imperial Irrigation District (IID) interconnection line and east of the Union Pacific Railroad, (Fig. 6)

    g. Appropriately aged buildings or structures at the Calipatria State Prison between locations M-9 and M-11, (Fig. 6).

    h. East of State Highway (SH) 86 near Howenstein Road (Alternative L-line Interconnection, Fig. 5).

    i. East of SH 86 south of the north boundary of Section 4 (Alternative L-line Interconnection, Fig. 5).

j. North of SH 86 in Section 32 (Alternative L-line Interconnection, Fig. 5).

k. North of SH 86 in Section 31 (Alternative L-line Interconnection, Fig. 5).

l. Appropriately-aged buildings or structures at Elmore Desert Ranch north of SH 86 in Section 23 (Alternative L-line Interconnection, Fig. 5).

BACKGROUND

The Vail Ranch property was evaluated as eligible for the California Register of Historical Resources (CRHR). The AFC (page 5.6-22) states that the setting of the Vail Ranch would not be substantively changed by construction of the L-Line Interconnection transmission line because there are existing power distribution lines on and near the Vail Ranch. Staff needs additional information on the existing transmission lines to evaluate whether impacts on the setting of the Vail Ranch will be significant.

32. Please provide a description of the poles or towers that support the existing transmission lines on and near the Vail Ranch. Please include the height of the existing poles or towers.

33. Please provide photographs of the existing poles or towers.

34. Please show the locations of the existing poles or towers in relation to the Vail Ranch structures and the proposed L-Line Interconnection towers on a large-scale map.

35. Please provide a discussion of the changes in setting of the Vail Ranch that will result from construction of the proposed L-Line Interconnection.

36. Please evaluate whether the changes in setting will materially affect the eligibility of the Vail Ranch under CEQA Section 15064.5(a)(3)(A, B, C, & D).

BACKGROUND

The Westside Main Canal (CA-IMP-7834) was evaluated as eligible for the National Register of Historical Places. Construction of the L-Line Interconnection (which would cross the canal) or the Alternative L-L Interconnection (which would parallel the canal) may change the setting of the canal. Staff needs more information about the potential changes in setting that will result from construction of these transmission lines

37. Please provide a discussion of the changes in setting of the Westside Canal that will result from construction of the proposed L-Line Interconnection and the Alternative L-L Interconnection.

38. Please evaluate whether the changes in setting will materially affect the eligibility of the canal under CEQA Section 15064.5(a)(3)(A, B, C, & D).

BACKGROUND

It appears from the cultural resource technical report (Archaeological Inventory Report) that archaeological sites BB-1, BB-2, CA-IMP-4931, and KH-1 along the L-Line Interconnection and archaeological site CA-IMP-7804 along the Alternative L-L Interconnection may be impacted by construction of access roads during construction of the transmission line. Any sites that cannot be avoided need to be evaluated for the California Register of Historical Resources (CRHR) to determine whether any eligible sites will be affected by the project. Comparing Figure 4 from the Archaeology Inventory Report and Figure 3.3-2C from the AFC, it appears that sites CA-IMP-4931 and KH-1 and, possibly, BB-2, are on BLM land and will need to be evaluated for eligibility for the National Register of Historical Places as well.

DATA REQUEST

39. Please evaluate whether any of the identified archaeological sites will be crossed, affected or impacted by construction or grading for access roads, staging areas, or other ancillary features necessary for installation of the transmission lines and towers.

40. For any cultural resources that can not be avoided, please conduct a test program, provide a discussion of the significance of the resources under CEQA Section 15064.5(a)(3)(A, B, C, & D) and provide staff with a copy of the assessment and the specialist's conclusions regarding significance.

41. For cultural resources on BLM land that cannot be avoided, please have a test program performed by an archaeologist or firm that has a valid Cultural Use Permit for the BLM California Desert District and provide CEC and BLM staff with a copy of the assessment and the specialist's conclusions regarding significance.

BACKGROUND

Figure 2 of the Archaeological Inventory report shows that Well Pad OB-3 is proposed in or on Obsidian Butte. Obsidian Butte is a well-known obsidian source and quarry used by prehistoric inhabitants of the area. However there were no records of Obsidian Butte provided as part of the AFC confidential appendix. Staff needs more information about the significance and potential impacts to Obsidian Butte.

42. Please provide a copy of the DPR 523 forms that record the cultural resources at Obsidian Butte, and ,with the appropriate request for confidentiality, a large-scale map showing the location of the well pad OB-3 in relation to intact portions of obsidian source material, prehistoric quarry sites, artifacts, and any other features.

43. Please provide a discussion of the significance of Obsidian Butte under CEQA Guidelines Section 15064.5(a)(3)(A, B, C, & D) and provide staff with a copy of the assessment and the specialist's conclusions regarding significance.

44. If evaluated as eligible for the CRHR, please provide a discussion of the impacts to the site as a result of construction of Well Pad OB-3.

BACKGROUND

It cannot be determined from the AFC and Archaeological Inventory report whether local jurisdictions (cities and counties) were contacted to determine if any historical resources in or near the project area are listed in local historical inventories or registers. Such local inventories are often not reflected in information obtained from a records search at the appropriate Archaeological Information Center. Historical resources in local inventories can qualify as Historical Resources under CEQA Guidelines Section 15064.5 (a) (2).

DATA REQUEST

45. Please provide a list of historical resources, within one mile of the power plant site and proposed transmission line, that are listed on city and county inventories or registers. Please provide a similar listing of historical resources, within 100 feet of underground linear routes, that are listed on city and county inventories or registers.

Technical Area: Geological Resources
Author: Dal Hunter, Ph. D.

BACKGROUND

Figure 5.2-3A and section 5.2.2.2 of the AFC show and discuss the proposed production and injection wells. Section 1.2.2 provides a very brief discussion of a mathematical modeling of reservoir dynamics. To aid in our understanding of the possible impacts on geological resources (geothermal) and possible cumulative impacts on existing geothermal facilities, please provide the following information. If information is considered proprietary, information may be filed with the appropriate request for confidentiality.

DATA REQUEST

46. Have test wells been drilled in any of these areas to verify that the geothermal fluids are as anticipated and, particularly, if injection wells can be expected to perform as planned? If so please briefly describe this work, its location and results.

47. Will the geochemical monitoring of the production wells include stable isotope analyses and age dating to aid in evaluating changes in the resource related to its development and use?

48. Is geochemical monitoring data available from neighboring geothermal developments and if so, has it also been evaluated as part of the feasibility and impact analysis for proposed Unit 6?

49. Please provide a discussion of the methods used for reservoir modeling, with references.

BACKGROUND

This is a fairly complex geological/geotechnical site, and the geotechnical investigation presented in the AFC is extremely well done. However, the project geotechnical investigation Addendum (Appendix J) indicates that some of the major structures have been relocated since the field investigation and that the new sites should be further explored.

DATA REQUEST

50. Provide a time frame and a discussion of plans for additional borings or cone penetrometer (CPT) soundings, as recommended; discuss if these will be completed for final design.

Technical Area: Hazardous Materials Management
Author: Geoff Lesh

BACKGROUND

The results of modeling of hydrogen sulfide (H_2S) emissions during routine operations and temporary conditions (startup and maintenance procedures) are shown. The modeling of potential H_2S gas concentrations resulting from a worst-case geothermal-steam release (e.g. wellhead blowout, pipe rupture, or other upset condition) appears to not be evaluated.

DATA REQUEST

51. Provide emissions modeling results and exposure assessment for the worst-case upset condition that shows expected maximum downwind distance to LD50 (Lethal Dose for 50 percent of exposed population), IDLH (Immediate Danger to Life and Health), and ERPG2 (Emergency Response Planning Guide Level 2) points under F-class stability conditions.

Technical Area: Land Use
Author: David Flores

BACKGROUND

The AFC (Sections 5.8.1.1.2 and 5.3.1.4) indicates that the project site is zoned HA (Heavy Agriculture), with a Geothermal Overlay and is irrigated prime farmland. Under CEQA, the applicant is required to mitigate for the permanent loss of prime agricultural land. The applicant, in response to the CEC data adequacy comments indicated "that if required, they will reserve, or cause to be reserved, other agricultural land, or will provide, or cause to be provided, improvements to other agricultural lands, to further reduce the potential impacts related to the development of prime agricultural land."

DATA REQUEST

52. The aforementioned proposal by the applicant does not provide specific information on how they will mitigate for the loss of prime agricultural land.

    a. Please provide a timeline for discussions or proposals with a local or statewide land trust, farming group, or the Imperial Valley Planning Department in mitigating for the loss of approximately 80 acres of irrigated prime agricultural land.

    b. Please summarize any mitigation discussions that have occurred to date.

Technical Area: Public Health
Author: Ramesh Sudareswaran

BACKGROUND

Tables 5.13-1 and 5.13-3 in the AFC indicate that up to 700,000 cubic feet of drilling waste, 16,700 tons of brine pond solids, and 120 tons of filter cake, as a minimum, would be hauled offsite. This would potentially entail a significant amount of truck traffic and diesel emissions, especially if significant numbers of trips are concentrated within a short time period.

DATA REQUEST

53. Please describe the anticipated number of truck trips for offsite transport of the referenced wastes as well as their schedule. Include diesel emissions from such truck trips into the public health risk assessment, unless it can been shown that the trucks trips would be configured so as not to warrant any concern.

BACKGROUND

Section 5.15 and Appendix G of the AFC list gaseous emissions that are anticipated from the project. The emissions lists appear to be not all-inclusive. Compounds such as rubidium and lithium, which are common in hydrothermal projects, appear to be missing.

DATA REQUEST

54. Clarify how the emissions lists were arrived at. Provide analytical data to substantiate that the listings are complete. In addition, include data for those compounds in liquid emissions from the project and identify those that should remain as solutes.

BACKGROUND

Section 5.15.2.1.4 mentions the use of the LO-CAT system and accessories for removal of hydrogen sulfide, benzene, arsenic and other non-condensable gases. Excluding hydrogen sulfide, removal efficiencies and capabilities for the other compounds appear to be overly optimistic without presentation of verifiable data.

DATA REQUEST

55. Provide verifiable data (including pilot test results) to substantiate removal capabilities and efficiencies. Also, provide a description of the contingency plan that would be activated, should the removal goals not be met.

BACKGROUND

Section 5.15.2.1.2 states that the duration of construction activities (20 months) will be too short to produce chronic health impacts, so that only an acute analysis was done. Conceptually, cancer is considered possible from any exposure to a carcinogen.

DATA REQUEST

56. Please include diesel exhaust from construction activities in a carcinogenic risk analysis. The analysis may reflect the short time period by using appropriate ratios, i.e. using a factor of 20 months: 70 years. However, in the Executive Summary, Section 1.4 indicates a construction duration of at least 26 months. Please provide clarifying discussion and perform the calculation using the appropriate ratio.

Technical Area: Socioeconomics
Author: Joseph Diamond, Ph. D.

BACKGROUND

Additional information would aid our understanding the socioeconomic impacts of non-local workers and their families if they relocated during construction and operation of the power project. It would also increase our understanding of the relevant labor markets and the local labor pool and the socioeconomic impacts of non-local labor. Generally, construction workers commute as much as two hours (one-way). This defines the local labor market. Construction workers who live in communities at greater distances than a two-hour one-way commute tend to relocate to the project for the workweek, then return on the weekend or bring their families when they relocate. Operations workers tend to fall inside a one-hour, one-way commute, and if they fall outside this area they will relocate.

DATA REQUEST

57. Please explain the analytical technique (e.g., a gravity model) used to distribute non-local workers and their families. Please note the applicant stated families would not likely accompany non-local workers during construction to the cities and towns in Imperial County. If this is so, please explain the rationale. Finally, please show all the calculations.

58. Please explain the rationale that based on past experience 40 percent of construction workers will be non-local and distributed to El Centro, Brawley, Calipatria, Niland and nearby areas in Imperial County.

59. Please explain the rationale that 10 percent of the operations workforce will be non-local and commute from the cities of Indio or La Quinta in Riverside County with the rest coming from El Centro, Brawley, Calipatria, and Niland in Imperial County.

60. Please specify the geographic location of construction and operations workers (local and non-local) and their commute time in order to estimate the number of non-local workers.

BACKGROUND

The AFC estimated the total investment value of the Salton Sea Unit 6 project as $460 million.

DATA REQUEST

61. Is this the project capital cost (plant and equipment)? If not, then explain what it does represent.

62. Please show the calculations for the estimate of property taxes that would equal $3 million as it appeared in the AFC utilizing the appropriate capital cost (plant and equipment/assessed) and other factors such as resource value, bond charges, special assessments, a rebate, and tax rate as appropriate. If the estimate in the AFC was incorrect, please show the revised calculations.

BACKGROUND

It is useful to know the school enrollment/school capacity relationship. This information is important to overlay with the location that non-local workers and families (school-aged children and other dependents) would locate (50 percent in El Centro and Brawley and other areas south of the site, 25 percent from Calipatria and other areas east of the site, and 25 percent from Niland and other areas north of the site). AFC Section 5.9.1.6.5 provides general information including number of classrooms in Calipatria schools.

DATA REQUEST

63. Please provide information for school enrollment/school capacity for Imperial County and the study area communities.

BACKGROUND

Accurate response time information for emergency and medical response and travel to the nearest hospital is necessary for staff analysis. AFC Section 5.9.1.6.3 provides some information regarding response times, but is incomplete for the service areas.

DATA REQUEST

64. What is the emergency response time to the project site by Gold Cross Ambulance from El Centro, which is 30 miles away, and Brawley, which is 17 miles away? How long will it take to send persons needing medical attention to Pioneer Memorial Hospital in Brawley, 22 miles from the project site, and El Centro Regional Center in El Centro, about 30 miles from the project site?

BACKGROUND

Accurate information for hospital capacity is necessary for staff analysis. AFC Section 5.9.1.6.4 provides some detail regarding Pioneers Memorial Hospital, and no information regarding the El Centro Regional Medical Center.

DATA REQUEST

65. How many beds and doctors/physicians are at the El Centro Regional Medical Center? Are there plans to expand the facility?

Technical Area: Soil and Water Resources
Author: Michael Krolak

BACKGROUND

Land disturbance near surface waters may create adverse sedimentation impacts. Construction of the L-Line interconnection will cross the New River, and construction of the Imperial Irrigation District (IID) Midway interconnection will cross the Alamo River. Both routes will cross numerous agricultural drains. The 500-foot buried IID water supply pipeline will use one of these drains as a delivery point. In addition, the AFC states that road improvements may be needed to access transmission line elements for construction, operation and maintenance. If road improvements will be required for operation and maintenance, these structures will most likely be permanent. The New River, the Alamo River, and Imperial Valley agricultural drains are listed on the Clean Water Act 303(d) lists as impaired waterbodies for silt, which construction activities can exacerbate.

Depending on the location and nature of these activities, Clean Water Act Section 404 permits from the U.S. Army Corps of Engineers (USACE) and Section 401 permits from the Colorado River Basin Regional Water Quality Control Board (RWQCB) may be required. Page 5.4-14 indicates that the project will comply with LORS pertaining to these regulations by applying for Section 401 certifications with the RWQCB and coordinating with USACE as needed. While these steps work to satisfy compliance with LORS, more information is needed to assess the level of impact significance under CEQA.

DATA REQUEST

66. Please describe construction activities that would be occurring near watercourses for the L-Line and IID Midway interconnections.

67. Please provide conceptual descriptions of road improvements occurring near watercourses. Please indicate whether each improvement would be temporary or permanent.

68. Please provide completed applications for USACE Section 404 permits that include complete descriptions of all project-related activities that would be occurring in or around watercourses.

69. Please provide completed applications for RWQCB Section 401 permits that include complete descriptions of all project-related activities that would be occurring in or around watercourses.

BACKGROUND

Construction and operation of the Salton Sea Unit 6 (SSU6) project may induce water and wind erosion at the power plant site and along the associated linear facilities. Stormwater runoff may also contribute to erosion and sedimentation as well as transport pollutants off-site. To avoid these impacts, a plan must be developed to minimize the area disturbed, to protect disturbed and sensitive areas, to retain sediment on-site, and to minimize off-site effects of stormwater runoff.

DATA REQUEST

70. Please provide a draft erosion control and stormwater management plan that identifies all measures that will be implemented at various locations of the project during construction and operation of the proposed SSU6 project. The draft erosion control plan shall identify all permanent and temporary measures in written form and depicted on construction drawing(s) of appropriate scale. The elements of the plan shall include any revegetation efforts and specific best management measures to be employed to control stormwater runoff during construction and operation at identified locations. In addition, any measures necessary to address Nationwide Permits or Streambed Alteration Agreements, as required, should be identified. Revegetation efforts should address both erosion control and habitat restoration. The plan should specify the type of seed and fertilizer, seeding and fertilizer rate, application method, the type and size of any container plants to be used, and the criteria for judging revegetation success. The plan should also identify maintenance and monitoring efforts for all erosion and revegetation measures including measures to rectify unsuccessful revegetation efforts.

71. Please provide a draft Storm Water Pollution Prevention Plan (SWPPP) consistent with the requirements for a General Storm Water Construction Activity Permit for the SSU6 project property. Include in this draft plan a spill prevention and countermeasures plan.

BACKGROUND

Data Adequacy Response Water-16 states that ground water at the site will be drained via the existing tile drainage system. The tiles will drain the water to two sumps at the northwest corner of the site, and from there three pumps will direct the water to the IID drainage ditch on the west side of Severe Road. The areas for the proposed brine ponds and detention pond will be used for evaporation and infiltration as necessary. Section 5.2 of the Geotechnical Investigation states that “artesian flow was observed in CPT-2 near the Vail Lateral 5 Drain along the western edge of the site. The artesian condition appears to be the result of the higher elevation of water in the Vail Lateral Drain.” These artesian flows on the west edge of the site would appear to have to potential to interfere with drainage sumps in the northwest corner of the site.

DATA REQUEST

72. How, if at all, will this artesian flow affect the tile drainage system? Will artesian flows fill the sumps?

73. Please estimate the amount of water that may be encountered during construction that will require dewatering and describe how this will be accomplished.

BACKGROUND

Data Adequacy Response Water-11 states that "fresh water would not be used for cooling tower make-up under normal operating conditions." However, the water balance provided in the AFC, Figure 3.3-9, shows approximately 135 gallons per minute (gpm) of the fresh water total (319 gpm) being added to the brine condensate to be sent to the cooling tower for evaporation.

In addition, the water balance is subtitled "Case 1b Conditions (Summer Design)." No water balance diagrams were provided for other cases.

DATA REQUEST

74. Please explain the discrepancy between the data adequacy response and the water balance diagram, which shows approximately 42% of the fresh water supplied going to the cooling tower. Please submit revised water balance diagrams if necessary.

75. Are there abnormal operating conditions that would employ fresh water for cooling tower make-up? If so, please provide water balance diagrams for those conditions.

76. Is there a water balance for other situations or conditions, such as a Case 1a or Case 2? If so, please provide those diagrams.

BACKGROUND

The SSU6 project will convert approximately 80 acres of agricultural land to industrial use, thereby taking that land out of production. According to page 5.4-8 of the AFC, each acre of agricultural land currently uses approximately 5 acre-feet per year (AFY), for a total of 865 AFY. Operation of the SSU6 project is expected to use approximately 293 AFY under average annual design conditions. This works out to savings of approximately 572 AFY.

The will-serve letter provided as Attachment 1 to Section 5.4 of the AFC defines "historical use amount" as "a volume of water consisting of 763 acre-feet per calendar

year." This number differs substantially from the 865 AFY volume listed in the AFC, and decreases the annual savings by 102 AFY to approximately 470 AFY.

The project's water use is based on a project design case of 23.5% salinity, however, the salinity can fluctuate up to a maximum of 25.0%, in which case, the project would require water at rates up to 987 AFY. If the project operated at this level for the entire year, this would result in an increase in water usage of 224 AFY (using the 763 AFY figure), or 122 AFY (using the 865 AFY figure).

DATA REQUESTS

77. Please explain the discrepancies in historical water use at the site, between the 865 AFY figure and the 763 AFY figure.

78. How often is the project expecting to use water at the rate of 987 AFY? Will factors other than salinity influence the rate of water use for the project, such as seasonal or temperature fluctuations?

79. How many cycles of concentration will be used in cooling tower operation?

BACKGROUND

Data Adequacy Response Water-11 states that "IID water is allocated for use as cooling water and dilution water for injecting brine solutions, as well as the reverse osmosis system (RO) water…other source waters (e.g. drainage water or groundwater) were not appropriate for use. Other sources of water were evaluated such as drain water or groundwater, but these were not available in sufficient quality or quantity."

The dilution of brine is a non-potable use of potable water, and is essentially dilution of project waste streams. Because use of potable water for waste dilution is not generally considered a beneficial use, staff requires a more detailed analysis of alternative water supplies for the project.

DATA REQUEST

80. Please provide an analysis of the feasibility and environmental impacts of alternative water supplies in comparison to the proposed use of IID canal water. The analysis should include, as a minimum:

    i) Identification and discussion of all potential water sources, including but not limited to, local groundwater, irrigation return water, local waste water treatment systems, and any potential suppliers of reclaimed or otherwise degraded water supplies;

    ii) Impacts to other users of IID fresh water supplies and the resulting waste discharge from the project in comparison to use of the IID supply;

iii) All economic factors considered (such as capital and operating costs including water purchase and infrastructure price; efficiency losses and economic impacts) and all assumptions and or vendor data to support these estimates; and

iv) Changes in plant and linear facility infrastructure that would be required to support each source of water supply.

81. Please confirm that the "cooling water" term in the Data Adequacy response statement that "IID water is allocated for use as cooling water and dilution water for injecting brine solutions" means cooling the brine, rather than cooling tower make-up.

BACKGROUND

The AFC states that two brine ponds will be used to contain production brines during "upset conditions." The ponds will be regulated by the Regional Water Quality Control Board (RWQCB) as a waste management unit. The AFC also states that reject water from the reverse osmosis (RO) system would be discharged to the brine ponds at an approximate rate of 720 gallons per day (gpd).

DATA REQUESTS

82. Please describe in further detail what "upset conditions" could entail and how the project would operate under such conditions. Please explain whether or not the facility would cease production of brine during these periods.

83. How often are these conditions expected to occur?

84. It is unclear whether the RO system reject water will be discharged to the brine ponds under normal operating conditions or only during upset periods. Please clarify.

85. What volume of brine will the ponds be designed to hold?

86. Are the brine ponds designed with any level of freeboard or extra design capacity to account for an upset period occurring during a 100-year rainfall event?

87. Will a backup protection plan be in place in the event of a brine pond failure or overflow?

BACKGROUND

The site lies within the 100-year flood zone. Imperial County Flood Damage Prevention Regulations require a Development Permit for facilities located at or below –220 feet elevation. Final grading at the site is expected to place the facility at elevation –228. To

protect the site, an 8-foot berm will be constructed around the site perimeter by improving the existing berm surrounding the agricultural field currently occupying the project site.

Staff requires additional information regarding flood flows in the area in order to assess the project's susceptibility to flooding and the project's impact on the floodplain.

DATA REQUEST

88. Please provide a history of runoff events at the site, including magnitude, duration and dates of the events, and how they were considered during facility design.

BACKGROUND

According to the AFC, a septic tank is proposed for disposal of domestic sanitary wastes.

DATA REQUESTS

89. Please provide a description of the septic system.

90. Please provide a plan showing the proposed septic system, the location of and distance to the nearest groundwater wells.

Technical Area: Traffic and Transportation
Author: Kenneth Peterson

BACKGROUND

In the AFC, Table 5.10-10 provides an excellent presentation of LORS. Additional information is needed in order to fully evaluate the project's conformance with the following laws, ordinances, regulations and standards:

- Title 49, Code of Federal Regulations, Sections 350-399, and Appendices A-G; and
- CA Vehicle Code, Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5.7, 34507.5 & 34510-11.

DATA REQUEST

91. Please submit an additional, or revised, table of laws, ordinances, regulations, and standards which includes the above-cited laws and regulations, a discussion of the applicability of each, and a discussion of the conformity of the project with the requirements of each.

BACKGROUND

The project will produce significant waste products during the construction and operation phases (AFC Tables 5.13-1 and 5.13-3). The AFC Traffic and Transportation Section does not fully describe:

- the impacts to local and regional road traffic patterns resulting from trucks hauling waste generated during project construction; and
- the impacts to local and regional road traffic patterns resulting from trucks making deliveries and trucks hauling waste during the project operation phase.

DATA REQUEST

92. Please provide the following for construction and operation phases:

    a. daily, weekly, and monthly truck traffic data related to hauling of waste generated during project construction, and expected impacts to local roads and traffic;

    b. daily, weekly, and monthly truck traffic data related to deliveries and waste hauling during the project operation phase.

Technical Area: Visual Resources
Author: James Adams

BACKGROUND

The AFC (Section 5.12.2.2.1 pp. 5-12-13) states that the impacts from the project's visible plumes would range from less than significant to no impact. Additionally, staff has received the applicant's SACTI modeling results. However, the information presented does not fully describe the project's plumes or the existing site conditions. In order to model the plume frequency and plume dimensions of the project's plume sources and determine the potential significance of the project's visible water vapor plumes in the context of the existing site conditions, staff requires additional information regarding:

- cooling tower and dilution water heater operating data,
- information on the meteorological data the applicant used to model the cooling tower plumes;
- information on the project's intermittent plume sources;
- information regarding the existing plumes sources near the proposed project site.

DATA REQUEST

93. Please identify the existing non-intermittent plume sources, such as cooling towers and dilution water heaters, in the immediate vicinity of the project site (i.e. within a radius of 3 miles). Please indicate, in terms relative to the project's cooling tower and dilution water heater sizes, the size of each of the existing cooling towers, dilution water heaters, and any other identified non-intermittent exhaust stack plume source. Please provide a map showing the location of each of these identified plume sources.

94. Please provide the operating exhaust temperatures and exhaust flows from the proposed project's cooling towers that correspond to the following ambient conditions. A similar set of ambient conditions, or a vendor plume fogging frequency curve, may be substituted for the values specified if they represent the range of ambient conditions expected at the site. The values presented should correspond to maximum anticipated heat rejection at the specified ambient conditions.

Table Visual Plume 1

Parameter	**Cooling Tower Exhausts**		
Cell Exhaust Height	18 meters		
Cell Diameter	10.7 meters		
Ambient Temperature	32°F	61°F	100°F
Ambient Relative Humidity (%)			
Tower Heat Rejection (MW/hr)			
Liquid/Gas Mass Flow Ratio			
Tower Design Inlet Air Flow Rate (kg/s)			
Exhaust Temperature (°F)			
Tower Exhaust Flow Rate (lb/hr)			

95. For staff to conduct modeling of the proposed project's dilution water heater exhausts, please provide exhaust parameter data to fill the following table. If the two dilution water heaters would not have identical exhaust parameters, then please fill out this table for each heater. A similar set of ambient conditions may be substituted for the values specified if they represent the range of ambient conditions expected at the site. The values must correspond to worst-case or maximum design operations that will occur over the life of the facility.

Table Visual Plume 2

Ambient Conditions	Relative Humidity (%)	Moisture Content (% by Weight)	Exhaust Flow Rate (lb/hr)	Exhaust Temperature (°F)
32°F				
61°F				
100°F				

96. Please explain the expected operation schedule for the dilution water heaters over the life of the project.

97. Please provide the raw meteorological surface data file(s) that were used to create the CD144 meteorological data file that was used in the Applicant's SACTI plume analysis.

98. Please provide a description of the project's intermittent vapor plume sources (such as the atmospheric flash tank and other intermittent steam vent sources), their expected frequency of occurrence, and their potential visible plume size.